

THE MACHRIS BRAZILIAN EXPEDITION

BOTANY: Phanerogamae, Bromeliaceae and other smaller families

By LYMAN B. SMITH¹

The plant collections reported upon below were obtained by E. Yale Dawson, Expedition botanist, and are cited by his field collection numbers. Detailed locality data for these may be found in his general account of the botany of the Expedition². Briefly, however, specimens bearing numbers from 14133 to 14815 came from the Chapada dos Veadeiros, between São João da Aliança and Veadeiros, April 13–May 3, 1956. Those bearing numbers from 14816 to 15236 came from the region between Amaro Leite and Peixe, especially in the southern Serra Dourada, May 15–June 10, 1956.

The first set of specimens is deposited in the Los Angeles County Museum, except holotypes of the two new species which are in the Museu Nacional do Brasil in Rio de Janeiro.

Inasmuch as the author is a specialist in only one of the families treated, namely the Bromeliaceae, references are given to the works used in making determinations in the others.

BROMELIACEAE

Bromelia karatas L. 14994

Bromelia villosa Mez 15109

Fig. 1.

Heretofore this highly ornamental species has been known by fragmentary dried material alone. It is hoped that the accompanying figure will arouse interest in its cultivation. The type of this species was collected by Glaziou between "Sitio de Bacarão" and "Areias," neither

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² Dawson, E. Yale. 1957. The Machris Brazilian Expedition. Botany: General. Los Angeles Co. Mus. Contr. Sci. (2):1-20.

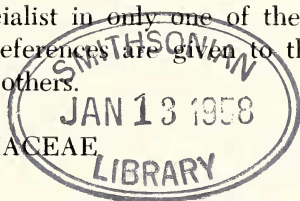




Fig. 1. *Bromelia villosa* Mez. A flowering specimen collected near Uruaçu, Goiás, May 25, 1956. Photo by M. A. Machris.

locality being identifiable, but in all probability situated in southern Goiás in the same region as that covered by the Machris Expedition.

Dyckia dawsonii L. B. Smith, sp. nov.

Fig. 2-4.

A *D. niederleinii* Mez, cui affinis, laminis foliorum angustissimis quam longitudine spinarum angustioribus, petalis minoribus ecarinatis differt.

Fruiting plant about 7 dm high; leaves to 22 cm long, the sheaths suborbicular, over 2 cm in diameter, glabrous, stramineous, lustrous, the blades linear, 7 mm wide at base, covered on both sides with cinereous appressed scales, laxly serrate with slender curved mostly subopposite spines 5-7 mm long; scape 4 mm in diameter, glabrous; scape-bracts broadly ovate with a linear blade, thin, entire, all but the lowest much shorter than the internodes; inflorescence simple, lax, 25-30 cm long, glabrous; floral bracts suborbicular, apiculate, 4 mm

long, thin, erose; pedicels stoutly obconic, 3 mm long; sepals broadly elliptic, obtuse, 5-6 mm long, thin, ecarinate; petals 9 mm long, ecarinate, the blade broadly obovate, yellow; stamens exerted, the filaments connate for 2 mm above the 1 mm tube with the petals; stigmas subsessile.



Fig. 2. *Dyckia dawsonii* sp. nov. Herbarium material prepared from a plant collected at the type locality by A. L. Carvalho and flowered in Rio de Janeiro in November 1956.



Fig. 3. *Dyckia dawsonii* sp. nov. A group of plants growing at the type locality in the Serra Dourada, Goiás, June 1, 1956. Photo by A. L. Carvalho.

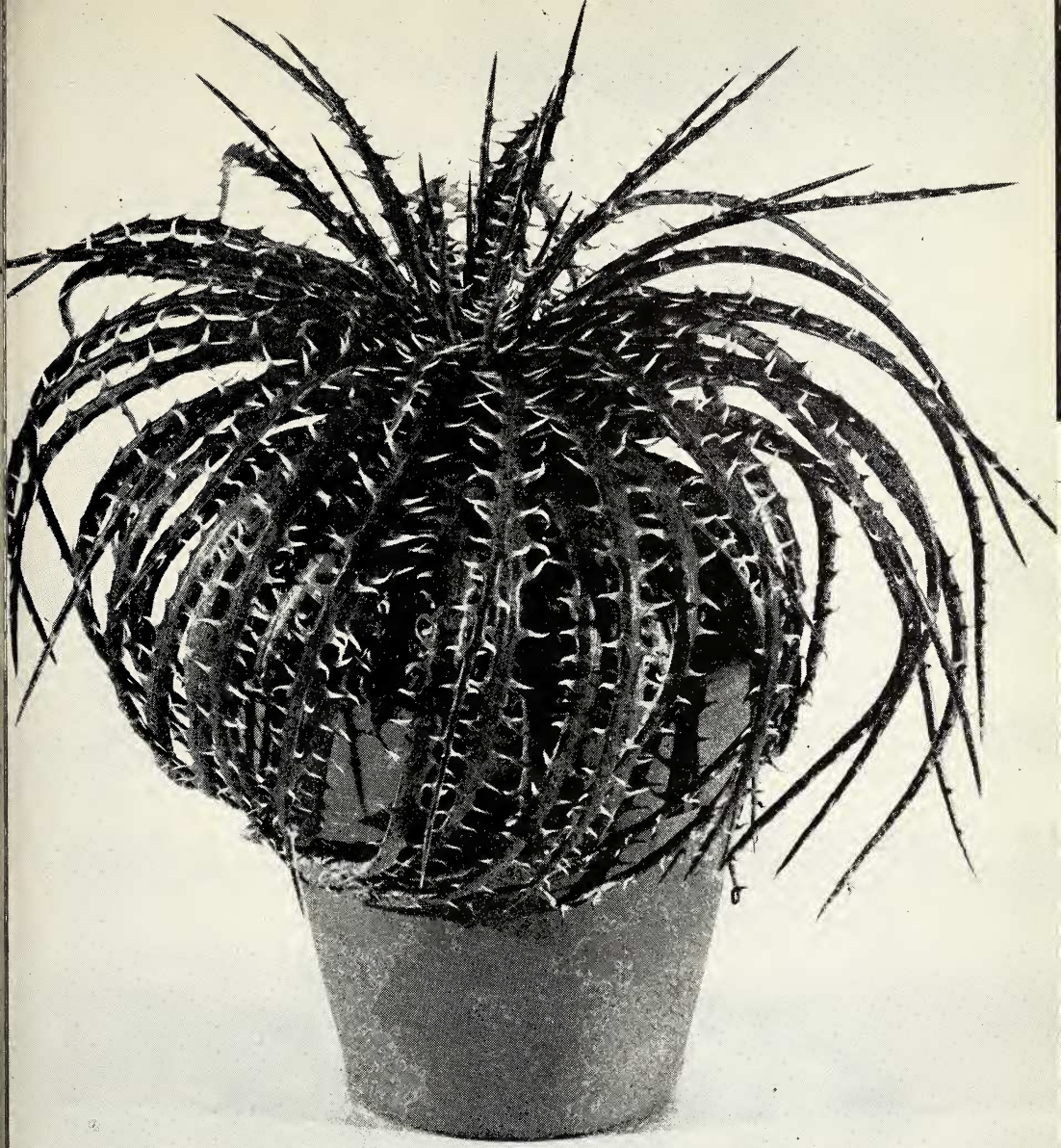


Fig. 4. *Dyckia dawsonii* sp. nov. A plant from the type collection cultivated in Santa Monica, California.

Type: Museu Nacional do Brasil, Rio de Janeiro, collected on rocks in an outcrop along a cerrado canyon 20 km east of Formoso, region of the southern Serra Dourada at W. Long. $48^{\circ} 50'$, S. Lat. $13^{\circ} 45'$, Goiás, Brazil, June 10, 1956, by E. Yale Dawson (No. 15236). Isotypes in the United States National Herbarium and in the Los Angeles County Museum. The original collection was in very old fruit, but was cultivated by A. L. Carvalho and flowered in Rio de Janeiro in November 1956. The description is drawn from both collections.

The technical floral characters of *Dyckia dawsonii* place it next to *D. niederleinii*, to which it bears little resemblance otherwise. Its leaves alone distinguish *Dyckia dawsonii* from all other species in the genus, but are strikingly similar to those of *Encholirium bradeanum* L. B.



Fig. 5. *Dyckia machrisiana* sp. nov. The type specimen.

Smith. The latter, however, has a relatively long cylindrical pedicel which quickly distinguishes it from *Dyckia dawsonii* even in fruit.

Dyckia machrisiana L. B. Smith, sp. nov.

Fig. 5.

A *D. tuberosa* (Vell.) Mez, cui affinis, laminis foliorum utrinque albido-lepidotis, laminis petalorum atris differt.

Flowering plant 8 dm high; leaves rosulate, 25 cm long, the sheaths suborbicular, 3 cm in diameter, glabrous, the blades linear-triangular, 15 mm wide, covered on both sides with white subappressed scales, laxly serrulate with acicular teeth 1 mm long; scape 4 mm in diameter, sparsely pale-lepidote; scape-bracts broadly ovate, thin, abruptly contracted into a linear-triangular apex, all but the lowest several times shorter than the internodes; inflorescence simple, lax, sparsely pale-lepidote; rhachis slender, flexuous; floral bracts broadly ovate, acuminate, to 6 mm long; flowers spreading or divergent; pedicels cylindric, stout, 2-4 mm long; sepals ovate, obtuse, 7 mm long, ecarinate, rather fleshy; petals 10 mm long, the blades elliptic, ecarinate, dark blackish orange externally (! Dawson); stamens included, the filaments free above the short common tube with the petals; stigmas subsessile.

Type: Museu Nacional do Brasil, Rio de Janeiro, collected in open grassland and marginal cerrado 20 km north of São João da Aliança, region of the Chapada dos Veadeiros at W. Long. 47° 30', Lat. 14° 30', Goiás, Brazil, April 14, 1956, by E. Yale Dawson (No. 14153a). Photo no. 4836 in U. S. National Herbarium.

Dyckia minarum Mez 14153; 14803

Dyckia racemosa Baker 14494

This collection from the vicinity of São João da Aliança is the first since the type which was made by Gardner at Arraias in April 1840. The two localities are not far apart.

Tillandsia streptocarpa Baker 14587

ALISMACEÆ

Echinodorus paniculatus Micheli 15168

Sagittaria rhombifolia Cham. 15164

References: *Echinodorus*: N. C. Fassett, *Rhodora* 57: 133-156, 174-188, 202-212. 1955. *Sagittaria*: C. Bogin, *Mem. N. Y. Bot. Gard.* 9: 179-233. 1955.

ARALIACEÆ

Dendropanax cuneatum (DC.) Dcne. & Planch. 14890

Didymopanax macrocarpum Seem. 14267

References: E. Marchal, *Fl. Brasiliensis* 11, pt. 1: 229-258. 1878

(as *Hederaceæ*). *Dendropanax*: Rehder & Merrill, Journ. Arnold Arboretum 18: 228. 1937.

BORAGINACEÆ

Cordia calocephala Cham. 14749

Cordia superba Cham. 14996

Heliotropium indicum L. 14905

Heliotropium salicoides Cham. 14196

References: *Cordia*: I. M. Johnston, Contrib. Gray Herb. 92: 5-65. 1930. *Heliotropium*: I. M. Johnston, Contrib. Gray Herb. 81: 3-73. 1928.

BURMANNIACEÆ

Burmannia capitata (Walt.) Mart. 14632

Burmannia flava Mart. 14886a

Reference: F. P. Jonker, Monograph of the Burmanniaceae 1-279. 1938.

COMBRETACEÆ

Combretum fruticosum (Loefl.) Stuntz 15191

Reference: A. W. Exell, Journ. Linn. Soc. 55: 103-141. 1953.

LOGANIACEÆ

Spigelia scabra Cham. & Schlecht. 15125

Reference: A. Progel, Fl. Brasiliensis 6, pt. 1: 249-300. 1868.

PRIMULACEÆ

Anagallis pumila Sw. 14793; 14885

Reference: F. Pax & R. Knuth, Pflanzenreich IV. Fam. 237: 1-386. 1905.

STYRACACEÆ

Styrax ferrugineus Nees & Mart. var. *grandifolius* Perk. 15076; 15234.

Reference: J. Perkins, Pflanzenreich IV. Fam. 241: 1-111. 1907.

TILIACEÆ

Luehea speciosa Willd. 15046

Triumfetta abutiloides St.-Hil. 14376; 14732

Triumfetta althæoides Lam. 15129

References: *Luehea*: C. Schumann, Fl. Brasiliensis 12, pt. 3: 117-200. 1886. *Triumfetta*: Ko Ko Lay, Ann Missouri Bot. Gard. 37: 315-395. 1950.